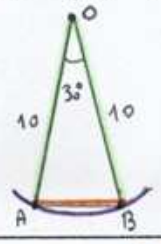
| Sınıf | | ARNAVUTKÖY KORKMAZ YİĞİT ANADOLU LİSESİ<br>2009-2010 EĞİTİM VE ÖĞRETİM YILI<br>11. Sınıf I. Dönem II. *Geometri II* Yazılısı | |
|---|---|---|---|
| Ad Soyad | | | |
| No | | | |

**1** — 10 puan

Çevrel çemberinin yarıçapı 10 br olan düzgün onikigenin alanı kaç $br^2$'dir?

$\frac{360^\circ}{12} = 30^\circ$ (3)



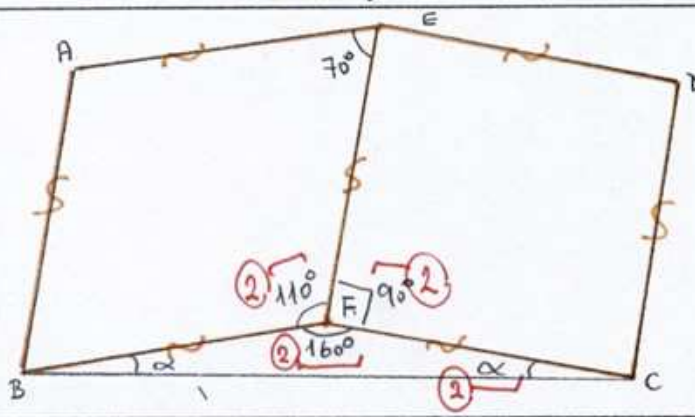

Alan = 12 . A(OAB) (2)

$= 12 \cdot \frac{1}{2} \cdot 10 \cdot 10 \cdot \sin 30^\circ$ (3)

$= 12 \cdot \frac{1}{2} \cdot 100 \cdot \frac{1}{2}$

$= 300$ (2)

**2** — 10 puan



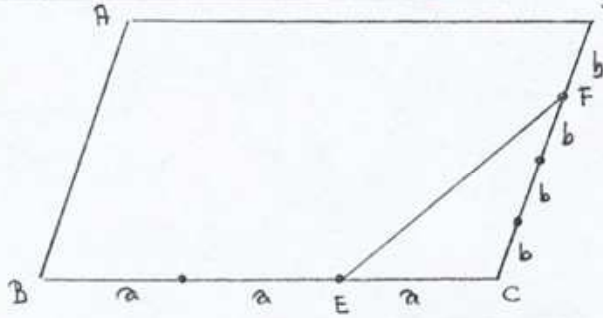

ABFE eşkenar dörtgen

DEFC kare

$m(\hat{AEF}) = 70^\circ \rightarrow m(\hat{FBC}) = ?$

$m(\hat{FBC}) = m(\hat{FCB}) = 10^\circ$ (2)

**3** — 10 puan

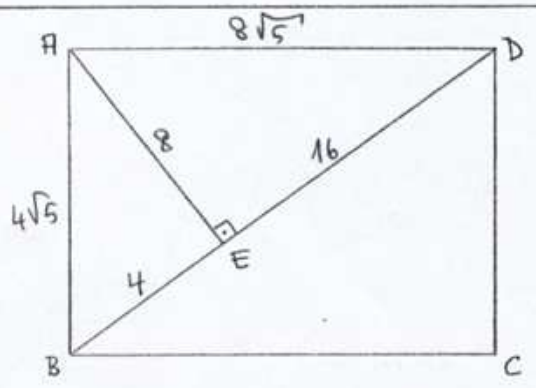



- ABCD paralelkenar
- [BC] : 3 eşit parçaya bölünmüştür.
  [CD] : 4 eşit

$\rightarrow A(\hat{ECF}) / A(ABCD) = ?$

(4) $2 \cdot 3b / 2 \cdot 3a \cdot 4b$ (4) $= \frac{3ab}{24ab} = \frac{1}{8}$ (3)

**4** — 10 puan




ABCD dikdörtgen

|BE| = 4, |ED| = 16

Çevre (ABCD) = ?

(2) |AB| = $4\sqrt{5}$

(2) |AD| = $8\sqrt{5}$

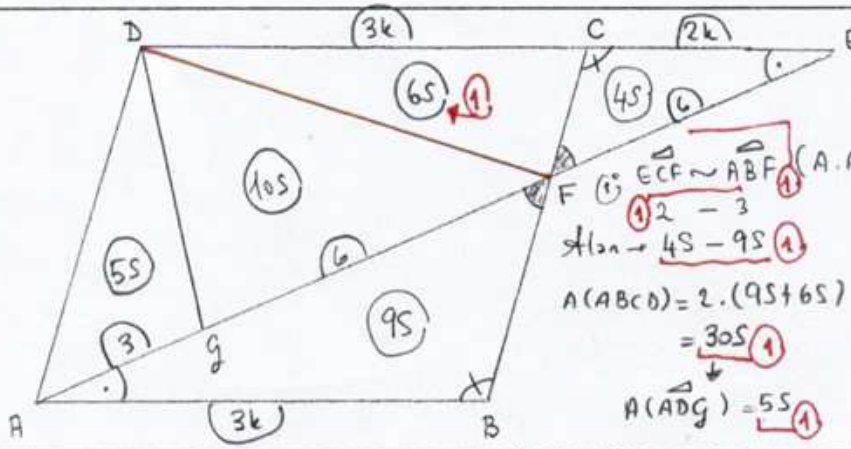
(2) $|AE|^2 = 4 \cdot 16$ ($\hat{ABD}$'de Euclid'ten)

(2) |AE| = 8

Çevre = $4\sqrt{5} + 8\sqrt{5} + 4\sqrt{5} + 8\sqrt{5}$

$= 24\sqrt{5}$ (2)

**5** — 10 puan




- ABCD paralelkenar
- $3|EC| = 2|AB| \wedge |GF| = 6$
- $\frac{A(\hat{ADG})}{A(ABCD)} = \frac{1}{6} \rightarrow |AE| = ?$

(1) $\hat{ECF} \sim \hat{ABF}$ (A.A.)

(1) 2 − 3

Alan → 45 − 95 (1)

A(ABCD) = 2.(95+65)

= 305 (1)

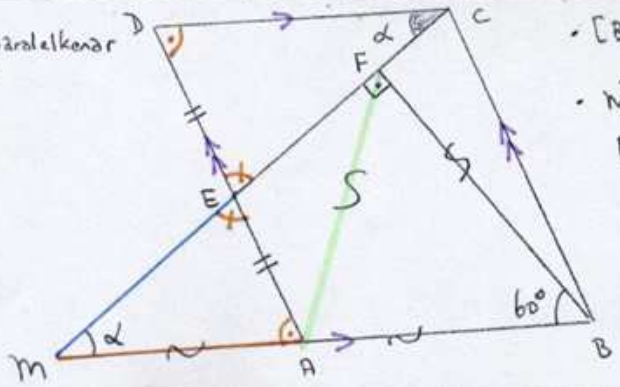
$A(\hat{ADG}) = 55$ (1)

$A(\hat{ADF}) = 155 \rightarrow A(\hat{DGF}) = 105$ (1)

(1) $|AG| = 3 \wedge |FE| = 6$ (1)

|AE| = 3 + 6 + 6 = 15 (1)

**6** — 10 puan



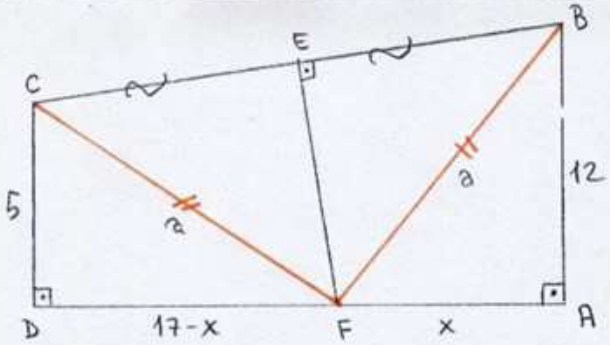

- $[BA \cap [CE = \{m\}$ (2)
- $\triangle MAE \cong \triangle CDE$ (A.K.A.) (2) + (1)

$[FA]$ çizilir. $|FA| = |MA| = |AB|$ (3)

$\triangle mAB$ eşkenar olur.
Veya
$\triangle FmB$ dik $\wedge$ $|mB| = 2|FB|$

→ $\alpha = 30°$ (2)

**7** — 10 puan

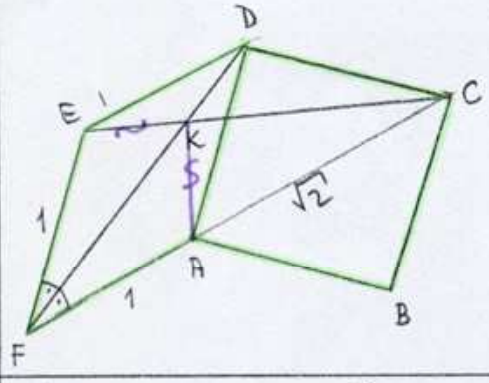



$|AB| = 12$
$|DC| = 5$
$|AD| = 17$
↓
$|AF| = ?$

$[CF]$ ve $[FB]$ çizilir. (3)
$\triangle CFB$ ikizkenar olur. ($|CF| = |FB|$) (3)

$5^2 + (17-x)^2 = a^2 = x^2 + 12^2$ (2)
$25 + 289 - 34x + x^2 = x^2 + 144$
$-34x = -170$
$x = 5$ (2)

**8** — 10 puan




- ABCD kare
- DEFA eşkenar dörtgen

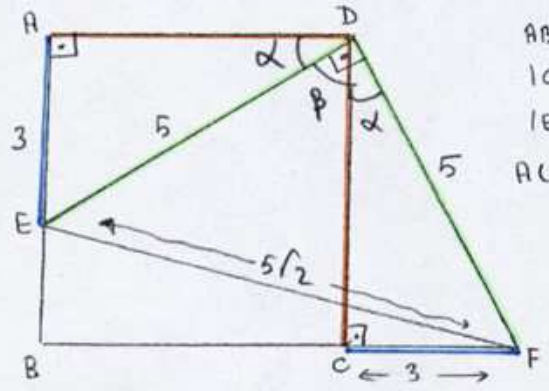
$|KA| = m \cdot |KC| \rightarrow m = ?$

- $|KA| = |KE|$ (*) (3)
- $\triangle FEC$'de iç açıortay teo. (4)

$\frac{1}{|KE|} = \frac{1+\sqrt{2}}{|KC|}$ ← (*) $|KA| = \frac{1}{\sqrt{2}+1} \cdot |KC|$

$m = \frac{1}{\sqrt{2}+1} \cdot \frac{(\sqrt{2}-1)}{(\sqrt{2}-1)} = \frac{\sqrt{2}-1}{2-1} = \sqrt{2}-1$ (2) (1)

**9** — 10 puan

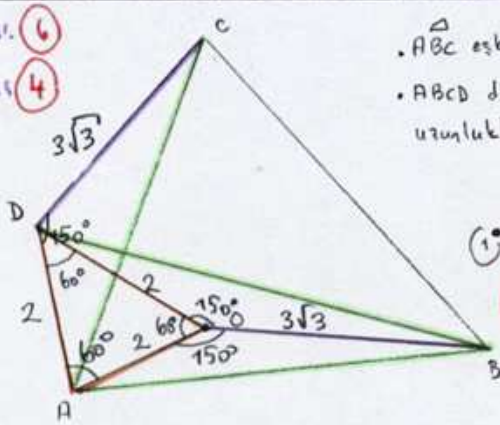



ABCD kare
$|CF| = 3$
$|EF| = 5\sqrt{2}$
$A(ABCD) = ?$

$\triangle FDC \cong \triangle EDA$ (A.K.A.) (2) + (1)
→ $|CF| = |AE| = 3$ (2)
→ $|DF| = |ED| \rightarrow |DF| = |ED| = 5$ (2)
→ $|AD| = 4$ (2)
$A(ABCD) = 4^2 = 16$ (1)

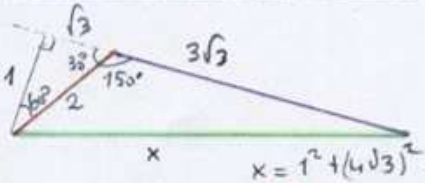
**10** — 10 puan

Yorum: (6)
Sonuç: (4)




- $\triangle ABC$ eşkenar
- ABCD dörtgeninin köşeler uzunlukları toplamını bulun.

(1) $R_A^{-60°}(\triangle ADC) = \triangle AOB$ (2)
(2) $m(D\hat{A}O) = 60° \rightarrow \triangle DAO$ eşkenar
(2) $m(D\hat{O}B) = 150° \rightarrow |BD| = |BA|$




$x = 1^2 + (4\sqrt{3})^2 = 49$
(2) $x = 7$

(3) $= |AC| + |DB|$
$= 7 + 7 = 14$ (2)

**Ümit CANLI**
Başarılar...